



be big-T™

BE Power and GE Renewable Energy are co-development partners in the investigation, development, construction, and operation of the Big-T Pumped Hydro Energy Storage (PHES) Project at Lake Cressbrook.



GE Renewable Energy

FACT SHEET — May 2023

Situated on Lake Cressbrook, approximately 50km north-east of Toowoomba, the proposed Big-T Pumped Hydro Energy Storage (PHES) Project consists of an upper reservoir to be constructed on privately owned land, with the lower reservoir utilising Lake Cressbrook. The power station, connecting waterways and transmission are all underground.

The Big-T Project has been designed to minimise environmental impact and maximise the benefits to the wider community. Once complete, the Big-T will be an almost invisible asset, working hard over its 80 year life to lower electricity prices and keep the lights on when there are challenges in electricity supply.

If approved, this Project will be able to generate 400MW, for up to 10 hours continuously, before recharging — making it a highly effective energy storage system, that supports grid stability as we transition to a renewables-focused energy system.

The electricity connection involves construction of buried electrical cables from the Project's underground power station to the Powerlink – Tarong to Middle Ridge transmission line. The electricity connection is to be built under the existing road easement of Sebastapool and Three Mile Roads.

The combination of an underground power station and buried electrical connection in the existing public road easement, minimises land clearing, removes overhead transmission towers/lines and also mitigates bush fire risk associated with overhead power.



Project update

Following the Big-T's declaration as a Coordinated Project in September 2022 by the Queensland Coordinator-General, the project team is currently preparing a full environmental impact statement (EIS) involving the whole-of-government and ongoing public consultation.

Over the coming months, we will be working on additional EIS consultation and engagement. As part of this process, we will meet with key stakeholders, local businesses, residents, community groups, Traditional Owners, and government representatives to provide an update on project progress and take feedback.

We welcome and encourage your involvement in this process. Please visit our website at www.bepower.com.au to see information on upcoming engagement sessions, contact us at enquiries@bepower.com.au or call our project hotline on 1800 853 280 to leave your feedback.



Benefits to the Region

The Big-T Project has a funded cost of over \$1.5 billion and will bring significant social and economic benefits to the Toowoomba and Somerset regions. This includes local investment and employment opportunities for residents, with approximately 250-500 jobs during construction and 15-30 ongoing jobs during operation.



About BE Power

BE Power Group develops, finances and operates renewable energy power plants. BE Power also undertakes electricity trading and retailing activities. BE Power is the principal project originator and developer who have partnered with GE Renewable Energy to develop, construct, and operate the project.



GE Renewable Energy

About GE Renewable Energy

GE Renewable Energy is a \$15 billion business with one of the broadest portfolios in the renewable energy industry including onshore and offshore wind, blades, hydro, storage, utility-scale solar, grid solutions, hybrid renewables, and digital services offerings. GE Renewable Energy is the co-development partner who will develop, construct, and operate the project.



Environmental Impact Statement (EIS) Process

In September 2022, the Project was declared a Coordinated Project under the State Development and Public Works Organisation Act 1971. This means the project will progress through a whole-of-government environmental impact assessment approach, which will invite stakeholder and community consultation and engagement.

An EIS is the highest form of environmental assessment in Queensland, involving a rigorous assessment of a project's environmental, social and economic impacts. The EIS for the proposed Big-T Project will be prepared in accordance with the approved terms of reference and will provide a full description of:

- the current environment in the area of the project
- all potential environmental, social and economic impacts of the project
- proposals to avoid, minimise, mitigate and/or offset any potential impacts.

Community consultation activities are an important part of the EIS process. We are working to continue engagement with key stakeholders, including all levels of government, community organisations, local businesses and residents, and Traditional Owners of the land over the coming months.

We invite you to be part of this process by visiting our EIS engagement sessions or contacting us at enquiries@bepower.com.au or call our project hotline on **1800 853 280** to have your say.

What is Pumped Hydro Energy Storage?

Pumped Hydro Energy Storage or PHES projects are large-scale water batteries that store energy.

PHES systems pump water uphill to an elevated reservoir when electricity prices are low, usually in during excess solar generating times. When electricity prices are high, water is released from the upper reservoir to power a turbine to generate electricity.

Closed loop PHES systems, such as the Big-T Project, do not consume water. They operate by recirculating water between the lower and upper reservoirs, through the pumping turbines.

The Big-T Project presents one of the lowest-cost pumped hydro energy storage opportunities available in Australia and is expected to a boost to the achievement of the Queensland Government's 2030 Renewable Energy Target.

If approved, it will help to facilitate the addition of 3,000– 5,000MW¹ in renewable energy projects in Southern Renewable Energy Zone, by adding additional network stability to support renewable energy generation. Development of this zone would remove approximately 7.9–13.3 million tonnes of CO₂ per annum from our atmosphere.

¹ AEMO Integrated System Plan 2020 Appendix 5



Project principles

The Big-T Project Team is committed to managing and where possible, mitigating any project impacts. We have developed a series of principles that will continue to guide our thinking and planning during the current phase, and into the future.

1. First Nations cultural heritage and engagement

We are working to engage with the local First Nations community during the development, construction, and operation of the project, for their direction and engagement in minimising any impact on their land.

2. Environmental impact

We are working to implement a variety of initiatives to reduce the environmental impact of the project, protect native flora and fauna and local vegetation, reduce visual impact, and negate bush fire risk.

3. Lake Cressbrook water security and water quality

We are working to ensure the project does not impact Council water security as well as working to minimise the impact on Lake Cressbrook water quality during construction and operation.

4. Sustainable engineering design

We are working to design safe infrastructure and ensure the project has long-term design and economic viability.

5. Social and economic benefits

We are committed to maximising social and economic benefits to the Toowoomba and Somerset Regions, as well as the National Electricity Market, with the delivery of this project.

6. Lake Cressbrook recreational users

We are working to mitigate impact on recreational users. The project is situated on the northern side of Lake Cressbrook in an area predominantly not open to the general public and minimal project infrastructure or construction activity is expected to impede on public open space.

7. Stakeholder engagement

We are working to undertake open, accurate, timely, and consultative communication and engagement with project stakeholders and our communities.



Get in touch

We are committed to keeping the community informed throughout the life of the Big-T Project and is engaging widely with local residents, Councils, and Traditional Owners. We welcome your questions and comments.

If you would like to share your views, receive Big-T Project updates via email, or are interested in supplying services to the Project email us at enquiries@bepower.com.au or call our project hotline on 1800 853 280 or visit www.bepower.com.au